

L15 ANSWER 1 OF 9 USPATFULL

ACCESSION NUMBER: 1998:101636 USPATFULL
 TITLE: Method of inhibiting the hyperproliferation of malignant cells
 INVENTOR(S): Knutson, Joyce C., Madison, WI, United States
 Bishop, Charles W., Verona, WI, United States
 PATENT ASSIGNEE(S): Bone Care International, Inc., Madison, WI, United States (U.S. corporation)

NUMBER DATE

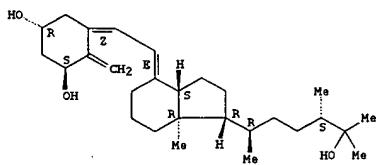
 PATENT INFORMATION: US 5798345 980825
 APPLICATION INFO.: US 95-486387 950607 (8)
 RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 94-265438, filed on 24 Jun 1994 which is a continuation of Ser. No. US 92-086534, filed on 20 May 1992, now abandoned which is a continuation-in-part of Ser. No. US 91-800045, filed on 29 Nov 1991, now abandoned which is a continuation of Ser. No. US 90-586854, filed on 21 Sep 1990, now abandoned.
 DOCUMENT TYPE: Utility
 PRIMARY EXAMINER: Robinson, Allen J.
 ASSISTANT EXAMINER: Badio, Barbara
 LEGAL REPRESENTATIVE: Welch, Teresa J. Stroud, Stroud, Willink, Thompson & Howard
 NUMBER OF CLAIMS: 18
 EXEMPLARY CLAIM: 1
 NUMBER OF DRAWINGS: 2 Drawing Figure(s); 2 Drawing Page(s)
 LINE COUNT: 1016

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
 AB 1, alpha-hydroxy vitamin D_{sub}4 and analogues, preferably 1,24 dihydroxy vitamin D_{sub}4, which are useful as active compounds of pharmaceutical compositions for the inhibition of hyperproliferative activity of malignant cells.

IT 131249-38-2 143032-65-3 157893-62-4 (hydroxy vitamin D4 and analogs for malignant cell hyperproliferation, pharmaceutical and cosmetic compns., and prepns. of 5,6-cis-1, alpha-hydroxy vitamin D4)
 RN 131249-38-2 USPATFULL
 CN 9,10-Secocrosta-5,7,10(19)-triene-1,3,25-triol, (1.alpha.,3.beta.,5Z,7E) - (9CI) (CA INDEX NAME)

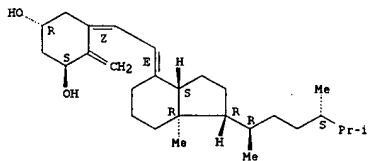
Absolute stereochemistry.
 Double bond geometry as shown.

L15 ANSWER 1 OF 9 USPATFULL (Continued)



RN 143032-65-3 USPATFULL
 CN 9,10-Secocrosta-5,7,10(19)-triene-1,3-diol, (1.alpha.,3.beta.,5Z,7E) - (9CI) (CA INDEX NAME)

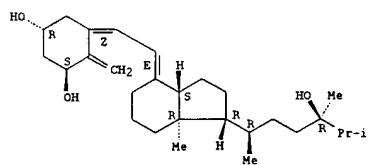
Absolute stereochemistry.
 Double bond geometry as shown.



RN 157893-62-4 USPATFULL
 CN 9,10-Secocrosta-5,7,10(19)-triene-1,3,24-triol, (1.alpha.,3.beta.,5Z,7E) - (9CI) (CA INDEX NAME)

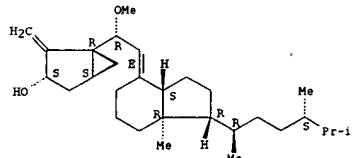
Absolute stereochemistry.
 Double bond geometry as shown.

L15 ANSWER 1 OF 9 USPATFULL (Continued)



IT 186489-60-1P (prepns. and reactions) hydroxy vitamin D4 and analogs for malignant cell hyperproliferation inhibition, pharmaceutical and cosmetic compns., and prepn. of 5,6-cis-1, alpha-hydroxy vitamin D4)
 RN 186489-60-1 USPATFULL
 CN Bicyclo[3.1.0]hexan-3-ol, 1-[(1R,2S)-1-methoxy-2-[(1R,3S,5S)- (9CI) (CA INDEX NAME)]

Absolute stereochemistry.
 Double bond geometry as shown.



L15 ANSWER 2 OF 9 USPATFULL

ACCESSION NUMBER: 1998:98906 USPATFULL
 TITLE: Method of treating prostatic diseases using delayed and/or sustained release vitamin D formulations
 INVENTOR(S): Bishop, Charles W., Madison, WI, United States
 Knutson, Joyce C., Madison, WI, United States
 Valliere, Charles R., Waunakee, WI, United States
 PATENT ASSIGNEE(S): Bone Care International, Inc., Madison, WI, United States (U.S. corporation)

NUMBER DATE

 PATENT INFORMATION: US 5795882 980818
 APPLICATION INFO.: US 96-775447 961230 (8)
 RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 95-485354, filed on 7 Jun 1995, now patented, Pat. No. US 5614513 which is a division of Ser. No. US 94-196116, filed on 22 Feb 1994, now patented, Pat. No. US 5529991 which is a continuation-in-part of Ser. No. US 92-901886, filed on 22 Jun 1992, now abandoned

DOCUMENT TYPE: Utility
 PRIMARY EXAMINER: Killas, Paul J.
 ASSISTANT EXAMINER: Welch, Teresa J. Stroud, Stroud, Willink, Thompson & Howard
 NUMBER OF CLAIMS: 24
 EXEMPLARY CLAIM: 1
 NUMBER OF DRAWINGS: 2 Drawing Figure(s); 2 Drawing Page(s)
 LINE COUNT: 1546

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Method of treating prostatic conditions such as prostate cancer and hyperplasia by administering 1, alpha-hydroxyvitamin D or activated

vitamin D or a combination thereof in a sustained release form or a delayed and sustained release formulation. Both the sustained release form and the delayed, sustained release form deliver increased active

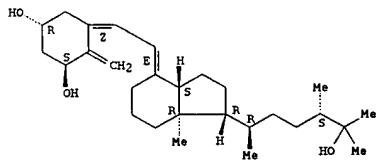
vitamin D blood levels without significant risk of hypercalcemia associated with other oral dosing of Vitamin D forms, to provide the beneficial effect to the diseased prostate tissue.

IT 131249-38-2, 1, alpha.,25-Dihydroxyvitamin D4 157893-62-4, 1, alpha.,24-Dihydroxyvitamin D4 (delayed and/or sustained-release vitamin D formulations for treating

prostatic diseases)
 RN 131249-38-2 USPATFULL
 CN 9,10-Secocrosta-5,7,10(19)-triene-1,3,25-triol, (1.alpha.,3.beta.,5Z,7E) - (9CI) (CA INDEX NAME)

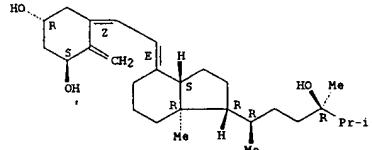
Absolute stereochemistry.
 Double bond geometry as shown.

L15 ANSWER 2 OF 9 USPATFULL (Continued)



RN 157893-62-4 USPATFULL
CN 9,10-Secooergosta-5,7,10(19)-triene-1,3,24-triol,
(1.alpha.,3.beta.,5 α ,7 β) -
(9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

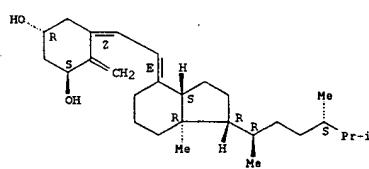


IT 143032-85-3, 1.alpha.-Hydroxyvitamin D₄
(delayed and/or sustained-release vitamin D formulations for
treating
prostatic diseases)

RN 143032-85-3 USPATFULL
CN 9,10-Secooergosta-5,7,10(19)-triene-1,3-diol,
(1.alpha.,3.beta.,5 α ,7 β) -
(9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

L15 ANSWER 2 OF 9 USPATFULL (Continued)



IT 143032-85-3, 1.alpha.-Hydroxyvitamin D₄
(delayed and/or sustained-release vitamin D formulations for
treating
prostatic diseases)

RN 143032-85-3 USPATFULL
CN 9,10-Secooergosta-5,7,10(19)-triene-1,3-diol,
(1.alpha.,3.beta.,5 α ,7 β) -
(9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

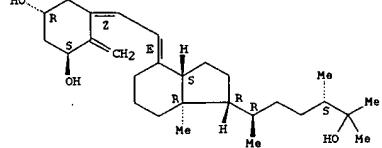
L15 ANSWER 3 OF 9 USPATFULL
ACCESSION NUMBER: 1998:65212 USPATFULL
TITLE: Method of treating prostatic diseases using active
vitamin D analogues
INVENTOR(S): Bishop, Charles W., Madison, WI, United States
Knutson, Joyce C., Madison, WI, United States
Mazess, Richard B., Madison, WI, United States
PATENT ASSIGNEE(S): Bone Care International, Inc., Madison, WI, United
States (U.S. corporation)

NUMBER	DATE
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PATENT INFORMATION:	US 5763429 980609
APPLICATION INFO.:	US 96-781910 961230 (8)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 95-415488, filed on 3 Apr 1995, now patented, Pat. No. US 5602116
which is	a continuation-in-part of Ser. No. US 93-119895, filed on 10 Sep 1993, now patented, Pat. No. US 5403831
And a	continuation-in-part of Ser. No. US 95-486387, filed on 7 Jun 1995, now patented, Pat. No. US 5674859
which is	a continuation-in-part of Ser. No. US 94-265438, filed on 24 Jun 1994
DOCUMENT TYPE:	Utility
PRIMARY EXAMINER:	Criates, Theodore J.
LEGAL REPRESENTATIVE:	Welch, Teresa J. Stroud, Stroud, Willink, Thompson Howard
NUMBER OF CLAIMS:	9
EXEMPLARY CLAIM:	1
LINE COUNT:	923

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention provides therapeutic methods for inhibiting,
ameliorating
or alleviating the hyperproliferative cellular activity of
diseases of
the prostate, e.g., prostatic cancer and prostatic hyperplasia,
which
includes administering to a patient in need thereof an active
vitamin D
analogue. Cell differentiation is promoted, induced or enhanced
without
causing to the patient dose-limiting hypercalcemia and
hypercalciuria.
IT 131249-38-2, 1.alpha.-Dihydroxyvitamin D₄ 143032-85-3
, 1.alpha.-Hydroxyvitamin D₄. 157893-62-4, 1.alpha.-24-
Dihydroxyvitamin D₄
(prostatic diseases using active vitamin D analogs and anticancer
agents)
RN 131249-38-2 USPATFULL
CN 9,10-Secooergosta-5,7,10(19)-triene-1,3,25-triol,
(1.alpha.,3.beta.,5 α ,7 β) -

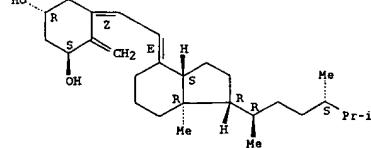
L15 ANSWER 3 OF 9 USPATFULL (Continued)
(9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



RN 143032-85-3 USPATFULL
CN 9,10-Secooergosta-5,7,10(19)-triene-1,3-diol, (1.alpha.,3.beta.,5 α ,7 β) -
(9CI) (CA INDEX NAME)

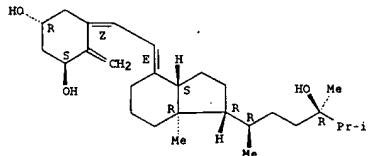
Absolute stereochemistry.
Double bond geometry as shown.



RN 157893-62-4 USPATFULL
CN 9,10-Secooergosta-5,7,10(19)-triene-1,3,24-triol,
(1.alpha.,3.beta.,5 α ,7 β) -
(9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

L15 ANSWER 3 OF 9 USPATFULL (Continued)

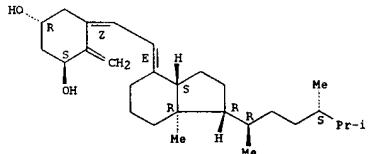


L15 ANSWER 4 OF 9 USPATFULL
ACCESSION NUMBER: 1998-65211 USPATFULL
TITLE: Methods of treating skin disorders with novel 1 α -hydroxy vitamin D_{sub}4 compounds and derivatives
INVENTOR(S): Knutson, Joyce C., Madison, WI, United States
Rishop, Charles W., Madison, WI, United States
PATENT ASSIGNEE(S): Bone Care International, Inc., Madison, WI, United States (U.S. corporation)
NUMBER DATE

PATENT INFORMATION: US 5763428 980609
APPLICATION INFO.: US 95-484342 950607 (8)
RELATED APPN. INFO.: Continuation-in-part of Ser. No. US 94-265438, filed on 24 Jun 1994 which is a continuation of Ser. No. US 92-886554, filed on 20 May 1992, now abandoned
which is a continuation-in-part of Ser. No. US 91-800045, filed on 29 Nov 1991, now abandoned which is a continuation of Ser. No. US 90-586054, filed on 21 Sep 1990, now abandoned
DOCUMENT TYPE: Utility
PRIMARY EXAMINER: Prior, Kimberly J.
LEGAL REPRESENTATIVE: Welch, Teresa J. Stroud, Stroud, Willink, Thompson & Howard
NUMBER OF CLAIMS: 21
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 2 Drawing Figure(s); 2 Drawing Page(s)
LINE COUNT: 1035
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The disclosure is of methods of treating various skin disorders, including skin cancer, with compounds of novel 1 α .hydroxy vitamin D_{sub}4 and novel analogues, thereof, including 1,25 dihydroxy vitamin D_{sub}4 and 1,24 dihydroxy vitamin D_{sub}4. Novel 1 α .hydroxy vitamin D_{sub}4 compounds and compounds of novel analogues suitable for use in the treatment of such disorders are also disclosed herein.
IT 143032-85-3P (prepn. and treating hyperproliferative skin disorders with novel 1 α -hydroxy vitamin D4 derivs.)
RN 143032-85-3 USPATFULL
CN 9,10-Secooergosta-5,7,10(19)-triene-1,3-diol, (1 α .,3 β .,5 α ,7E)-(9CI) (CA INDEX NAME)

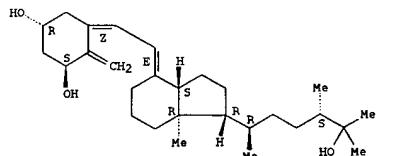
Absolute stereochemistry.
Double bond geometry as shown.

L15 ANSWER 4 OF 9 USPATFULL (Continued)



IT 131249-38-2P 157893-62-4P (prepn. and treating hyperproliferative skin disorders with novel 1 α -hydroxy vitamin D4 derivs.)
RN 131249-38-2 USPATFULL
CN 9,10-Secooergosta-5,7,10(19)-triene-1,3,25-triol, (1 α .,3 β .,5 α ,7E)-(9CI) (CA INDEX NAME)

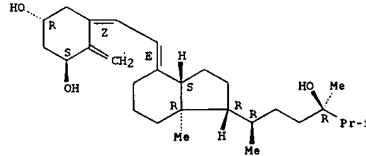
Absolute stereochemistry.
Double bond geometry as shown.



RN 157893-62-4 USPATFULL
CN 9,10-Secooergosta-5,7,10(19)-triene-1,3,24-triol, (1 α .,3 β .,5 α ,7E)-(9CI) (CA INDEX NAME)

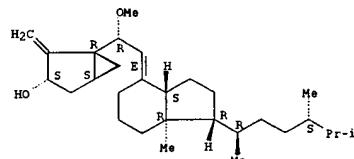
Absolute stereochemistry.
Double bond geometry as shown.

L15 ANSWER 4 OF 9 USPATFULL (Continued)



IT 186489-60-1P, 1 α .Hydroxy-3,5-cyclovitamin D4 (prepn. and treating hyperproliferative skin disorders with novel 1 α -hydroxy vitamin D4 derivs.)
RN 186489-60-1 USPATFULL
CN Bicyclo[3.1.0]hexan-3-ol, 1-[(1R,2E)-1-methoxy-2-[(1R,3aS,7aR)-octahydro-7a-methyl-1-[(1R,4S)-1,4,5-trimethylhexyl]-4H-inden-4-ylidene]ethyl]-2-methylene-, (1R,3S,5S)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



L15 ANSWER 5 OF 9 USPATFULL

ACCESSION NUMBER: 97120607 USPATFULL
 TITLE: Prevention and treatment of myocardial failure
 INVENTOR(S): Gulbrandsen, Carl E., Madison, WI, United States
 MOSS, Richard L., Middleton, WI, United States
 PATENT ASSIGNEE(S): Bone Care International, Inc., Madison, WI, United States (U.S. corporation)

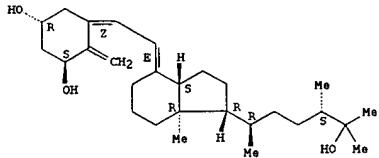
NUMBER DATE

PATENT INFORMATION: US 5700790 971223
 APPLICATION INFO.: US 96-588067 960117 (8)
 RELATED APPLN. INFO.: Continuation of Ser. No. US 94-311934, filed on 26 Sep 1994, now abandoned which is a continuation of Ser. No. US 93-10823, filed on 29 Jan 1993, now patented, Pat. No. US 5350745
 DOCUMENT TYPE: Utility
 PRIMARY EXAMINER: Jarvis, William R. A.
 LEGAL REPRESENTATIVE: Welch, Teresa J. Stroud, Stroud, Willink, Thompson & Howard
 NUMBER OF CLAIMS: 7
 EXEMPLARY CLAIM: 1
 LINE COUNT: 270
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.
 AB Method of increasing the strength of contraction in the mammalian heart muscle by administering to the mammal an effective amount of an activated Vitamin D compound, i.e. a 1.alpha.-hydroxylated Vitamin D compound which binds with the Vitamin D receptor and produces a positive inotropic effect in the heart muscle. The activated Vitamin-D compound may be given as a means to prevent myocardial failure or to treat myocardial failure.

IT 131249-38-1 143032-85-3 157893-62-4 (myocardial failure treatment with)
 RN 131249-38-2 USPATFULL
 CN 9,10-Secocergosta-5,7,10(19)-triene-1,3,25-triol, (1.alpha.,3.beta.,5 α ,7E)- (9CI) (CA INDEX NAME)

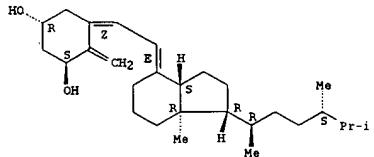
Absolute stereochemistry.
 Double bond geometry as shown.

L15 ANSWER 5 OF 9 USPATFULL (Continued)



RN 143032-85-3 USPATFULL
 CN 9,10-Secocergosta-5,7,10(19)-triene-1,3-diol, (1.alpha.,3.beta.,5 α ,7E)- (9CI) (CA INDEX NAME)

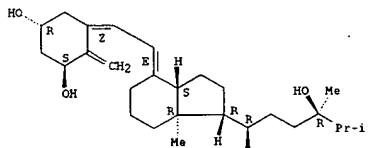
Absolute stereochemistry.
 Double bond geometry as shown.



RN 157893-62-4 USPATFULL
 CN 9,10-Secocergosta-5,7,10(19)-triene-1,3,24-triol, (1.alpha.,3.beta.,5 α ,7E)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
 Double bond geometry as shown.

L15 ANSWER 5 OF 9 USPATFULL (Continued)



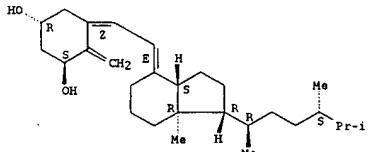
L15 ANSWER 6 OF 9 USPATFULL
 ACCESSION NUMBER: 9712454 USPATFULL
 TITLE: Method for treating and preventing secondary hyperparathyroidism
 INVENTOR(S): Knutson, Joyce C., Madison, WI, United States
 Bishop, Charles W., Verona, WI, United States
 Mazess, Richard B., Madison, WI, United States
 PATENT ASSIGNEE(S): Bone Care International, Inc., Madison, WI, United States (U.S. corporation)

NUMBER DATE

PATENT INFORMATION: US 5602116 970211
 APPLICATION INFO.: US 95-415488 950403 (8)
 RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 93-119895, filed on 10 Sep 1993, now patented, Pat. No. US 5403831
 which is a continuation of Ser. No. US 92-812056, filed on 5 Mar 1992, now abandoned which is a continuation of Ser. No. US 90-569412, filed on 17 Aug 1990, now patented, Pat. No. US 5104864 which is a continuation of Ser. No. US 88-227371, filed on 2 Aug 1988, now abandoned
 DOCUMENT TYPE: Utility
 PRIMARY EXAMINER: Criares, Theodore J.
 LEGAL REPRESENTATIVE: Welch, Teresa J. Stroud, Stroud, Willink, Thompson & Howard
 NUMBER OF CLAIMS: 9
 EXEMPLARY CLAIM: 1
 LINE COUNT: 822
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.
 AB A method for preventing loss of bone mass or bone mineral content in a human being suffering from secondary hyperparathyroidism by administering a sufficient amount of 1.alpha.-OH vitamin D_{sub.2}, 1.alpha.,24(OH).sub.2 vitamin D_{sub.2}, 1.alpha.-OH vitamin D_{sub.4} or 1.alpha.,24(R)-(OH).sub.2 vitamin D_{sub.4}.
 IT 143032-85-3, 1.alpha.-Hydroxy vitamin d4 157893-62-4 (vitamin D formulations for treating and preventing secondary hyperparathyroidism)
 RN 143032-85-3 USPATFULL
 CN 9,10-Secocergosta-5,7,10(19)-triene-1,3-diol, (1.alpha.,3.beta.,5 α ,7E)- (9CI) (CA INDEX NAME)

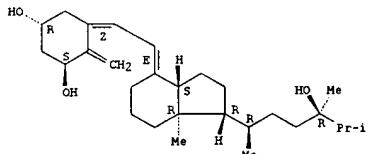
Absolute stereochemistry.
 Double bond geometry as shown.

L15 ANSWER 6 OF 9 USPATFULL (Continued)



RN 157893-62-4 USPATFULL
CN 9,10-Secoergosta-5,7,10(19)-triene-1,3,24-triol,
(1.alpha.,3.beta.,5Z,7E)-
(9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



RN 131249-38-2 USPATFULL
CN 9,10-Secoergosta-5,7,10(19)-triene-1,3,25-triol,
(1.alpha.,3.beta.,5Z,7E)-
(9CI) (CA INDEX NAME)

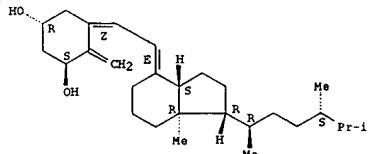
Absolute stereochemistry.
Double bond geometry as shown.



RN 143032-85-3 USPATFULL

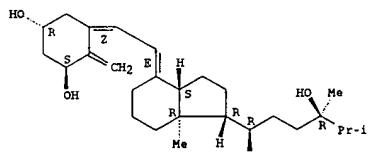
L15 ANSWER 7 OF 9 USPATFULL (Continued)
CN 9,10-Secoergosta-5,7,10(19)-triene-1,3-diol,
(1.alpha.,3.beta.,5Z,7E)-
(9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



RN 157893-62-4 USPATFULL
CN 9,10-Secoergosta-5,7,10(19)-triene-1,3,24-triol,
(1.alpha.,3.beta.,5Z,7E)-
(9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



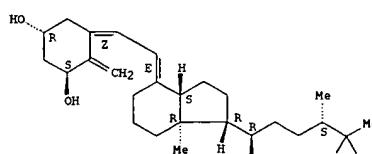
L15 ANSWER 8 OF 9 USPATFULL
ACCESSION NUMBER: 94-84252 USPATFULL
TITLE: Treatment of myocardial failure
INVENTOR(S): Gulbrandsen, Carl E., Madison, WI, United States
PATENT ASSIGNEE(S): Moss, Richard L., Middleton, WI, United States
Lunar Corporation, Madison, WI, United States (U.S. corporation)

NUMBER DATE

PATENT INFORMATION: US 5350745 940927
APPLICATION INFO.: US 93-10823 930129 (8)
DOCUMENT TYPE: Utility
PRIMARY EXAMINER: Cintins, Marianne M.
ASSISTANT EXAMINER: Jarvis, William R. A.
LEGAL REPRESENTATIVE: Stroud, Stroud, Willink, Thompson & Howard
NUMBER OF CLAIMS: 4
EXEMPLARY CLAIM: 1
LINE COUNT: 246
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Method of increasing the strength of contraction in the mammalian heart by administering to the mammal an effective amount of an activated Vitamin D compound, i.e. a 1.alpha.-hydroxylated Vitamin D compound which binds with the Vitamin D receptor and produces a positive inotropic effect in the heart muscle. The activated Vitamin D compound may be given as a means to treat myocardial failure.

IT 131249-38-2 143032-85-3 157893-62-4
(myocardial failure treatment with)
RN 131249-38-2 USPATFULL
CN 9,10-Secoergosta-5,7,10(19)-triene-1,3,25-triol,
(1.alpha.,3.beta.,5Z,7E)-
(9CI) (CA INDEX NAME)

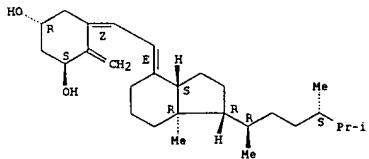
Absolute stereochemistry.
Double bond geometry as shown.



RN 143032-85-3 USPATFULL
CN 9,10-Secoergosta-5,7,10(19)-triene-1,3-diol, (1.alpha.,3.beta.,5Z,7E)-
(9CI) (CA INDEX NAME)

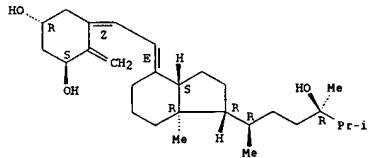
Absolute stereochemistry.

L15 ANSWER 8 OF 9 USPATFULL (Continued)
Double bond geometry as shown.

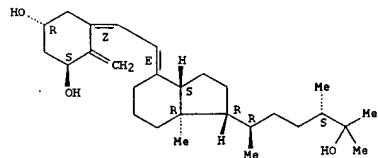


RN 157693-62-4 USPATFULL
CN 9,10-Secosteroids-5,7,10(19)-triene-1,3,24-triol,
(1.alpha.,3.beta.,5Z,7E)-
(9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



L15 ANSWER 9 OF 9 USPATFULL (Continued)



L15 ANSWER 9 OF 9 USPATFULL
ACCESSION NUMBER: 92:87065 USPATFULL
TITLE: 1.alpha.,25-dihydroxyvitamin D4 compounds,
ergosta-5,7-diene compounds and processes for the
preparation thereof
INVENTOR(S): Tsuji, Masahiro, Kawagoe, Japan
Tachibana, Yoji, Kawagoe, Japan
Yokoyama, Shinji, Ohi, Japan
Ikekawa, Nobuo, Musashino, Japan
PATENT ASSIGNEE(S): Nisshin Flour Milling Co., Ltd., Tokyo, Japan
(non-U.S. corporation)

NUMBER	DATE
US 5157135	921020
APPLICATION INFO.: US 90-496862 900321 (7)	
DISCLAIMER DATE: 20090211	

NUMBER	DATE
JP 89-78110	890331
DOCUMENT TYPE: Utility	
PRIMARY EXAMINER: Bond, Robert T.	
ASSISTANT EXAMINER: Ward, E. C.	
LEGAL REPRESENTATIVE: Abelmann, Freyne & Schwab	
NUMBER OF CLAIMS: 1	
EXEMPLARY CLAIM: 1	
LINE COUNT: 787	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB (24S)- and (24R)-1.alpha.,25-Dihydroxyvitamin D_{sub.4} compounds and
processes for preparing same. Ergosta-5,7-diene compounds which are
useful intermediates in the synthesis of the 1.alpha.,25-
dihydroxyvitamin D_{sub.4} compounds. The D_{sub.4} compounds are
expected to possess an interesting pharmacological activity in association
with

the active-type vitamins D_{sub.3} and D_{sub.2}.
IT 131249-38-2P
(prepn. of, via isomerization of ergostadienetriol deriv.)
RN 131249-38-2 USPATFULL
CN 9,10-Secosteroids-5,7,10(19)-triene-1,3,25-triol,
(1.alpha.,3.beta.,5Z,7E)-
(9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

=> file caplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	40.96	146.28
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-0.54

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FILE COVERS 1967 - 1 Feb 1999 VOL 130 ISS 6
 FILE LAST UPDATED: 1 Feb 1999 (19990201/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

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=> d his

(FILE 'HOME' ENTERED AT 15:53:14 ON 01 FEB 1999)

FILE 'REGISTRY' ENTERED AT 15:53:18 ON 01 FEB 1999

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L2	0 S 1,25-DIHYDROXY-24-HOMOVITAMIN D3
L3	0 S HOMOVITAMIN/CN
L4	1 S HOMOVITAMIN
L5	8 S 24(L)HOMO(L)VITAMIN
L6	0 S 24(L)HOMO(L)VITAMIN(L)D3/CN
L7	7 S 24(L)HOMO(L)VITAMIN(L)D3
L8	1 S VITAMIN D4/CN

FILE 'CAPLUS' ENTERED AT 15:57:19 ON 01 FEB 1999

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L10	7 S 1(L)HYDROXY(L)VITAMIN D4

FILE 'REGISTRY' ENTERED AT 15:58:43 ON 01 FEB 1999

L11	5 S 1(L)HYDROXY(L)VITAMIN D4
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L12      20 S L11
L13      11 S L11/THU
L14      1 S L13 NOT PY>=1997

FILE 'USPATFULL' ENTERED AT 16:00:31 ON 01 FEB 1999
L15      9 S L11

FILE 'CAPLUS' ENTERED AT 16:02:09 ON 01 FEB 1999

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=> d ibib ab hitst 1-11 113

'HITST' IS NOT A VALID FORMAT FOR FILE 'CAPLUS'

The following are valid formats:

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ABS ----- GI and AB
ALL ----- BIB, AB, IND
APPS ----- AI, PRAI
BIB ----- AN, plus Bibliographic Data and PI table (default)
CAN ----- List of CA abstract numbers without answer numbers
CBIB ----- AN, plus Compressed Bibliographic Data
DALL ----- ALL, delimited (end of each field identified)
DMAX ----- MAX, delimited for post-processing
FAM ----- AN, PI and PRAI in table, plus Patent Family data
FBIB ----- AN, BIB, plus Patent FAM
IND ----- Indexing data
IPC ----- International Patent Classifications
MAX ----- ALL, plus Patent FAM
PATS ----- PI, SO
SAM ----- CC, SX, TI, ST, IT
SCAN ----- CC, SX, TI, ST, IT (random display, no answer numbers;
           SCAN must be entered on the same line as the DISPLAY,
           e.g., D SCAN or DISPLAY SCAN)
STD ----- BIB, IPC, and NCL

IABS ----- ABS, indented with text labels
IALL ----- ALL, indented with text labels
IBIB ----- BIB, indented with text labels
IMAX ----- MAX, indented with text labels
ISTD ----- STD, indented with text labels

OBIB ----- AN, plus Bibliographic Data (original)
OIBIB ----- OBIB, indented with text labels

HIT ----- Fields containing hit terms
HITIND ----- IC, ICA, ICI, NCL, CC and index field (ST and IT)
            containing hit terms
HITRN ----- HIT RN and its text modification
HITSTR ----- HIT RN, its text modification, its CA index name, and
            its structure diagram
FHITSTR ----- First HIT RN, its text modification, its CA index name, and
            its structure diagram

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KWIC ----- Hit term plus 20 words on either side
OCC ----- Number of occurrence of hit term and field in which it occurs

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ENTER DISPLAY FORMAT (BIB):end

=> d ibib ab hitstr 1-11 113

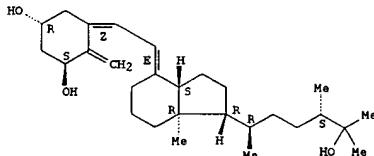
L13 ANSWER 1 OF 11 CAPLUS COPYRIGHT 1999 ACS
 ACCESSION NUMBER: 1998:582860 CAPLUS
 DOCUMENT NUMBER: 129:197986
 TITLE: Method of inhibiting the hyperproliferation of malignant cells with 1.alpha.-hydroxy vitamin D4
 and compositions, and analogs, pharmaceutical and cosmetic preparation of 5,6-cis-1.alpha.-hydroxy vitamin D4
 INVENTOR(S): Knutson, Joyce C.; Bishop, Charles W.
 PATENT ASSIGNEE(S): Bone Care International, Inc., USA
 SOURCE: U.S., 12 pp. Cont.-in-part of U.S. Ser. No. 265,438.
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 10
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5798345	A	19980825	US 95-486387	19950607
US 5488120	A	19960130	US 94-296084	19940824
US 5801164	A	19980901	US 95-480310	19950607
US 5756783	A	19980526	US 95-524889	19950907
WO 9640153	A1	19961219	WO 96-US9221	19960606
V: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, LZ, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9663791	A1	19961230	AU 96-63791	19960606
EP 831839	A1	19980401	EP 96-923223	19960606
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE, PT, IE, FI				
CN 1186435	A	19980701	CN 96-194460	19960606
US 5763429	A	19980609	US 96-781910	19961230
CA 2222593	AA	19961219	CA 97-2222593	19970606
PRIORITY APPLN. INFO.:				
US 91-80045			US 90-586854	19900921
US 91-80045			US 91-80045	19911129
US 92-886554			US 92-886554	19920520
US 94-265438			US 94-265438	19940624
US 92-827173			US 92-827173	19920129
US 92-991493			US 92-991493	19921217
US 93-119895			US 93-119895	19930910

L13 ANSWER 1 OF 11 CAPLUS COPYRIGHT 1999 ACS (Continued)
 ACCESSION NUMBER: 1998:564197 CAPLUS
 DOCUMENT NUMBER: 129:170519
 TITLE: Method of inhibiting the hyperproliferative activity of malignant cells. Prepn. of 5,6-cis-1.alpha.-Hydroxy vitamin D4 and analogs, preferably 1,24 dihydroxy vitamin D4 are useful as active compds. of pharmaceutical compns. for the inhibition of hyperproliferative activity of malignant cells. Prepn. of

IT 131249-38-2 143032-85-3 157893-62-4
 RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (hydroxy vitamin D4 and analogs for malignant cell hyperproliferation inhibition, pharmaceutical and cosmetic compns., and prepn. of 5,6-cis-1.alpha.-hydroxy vitamin D4)
 RN 131249-38-2 CAPLUS
 CN 9,10-Secosterosta-5,7,10(19)-triene-1,3,25-triol, (1.alpha.,3.beta.,5Z,7E)-(9CI) (CA INDEX NAME)

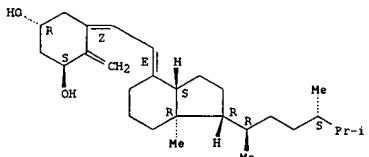
Absolute stereochemistry.
 Double bond geometry as shown.



RN 143032-85-3 CAPLUS
 CN 9,10-Secosterosta-5,7,10(19)-triene-1,3-diol, (1.alpha.,3.beta.,5Z,7E)-(9CI) (CA INDEX NAME)

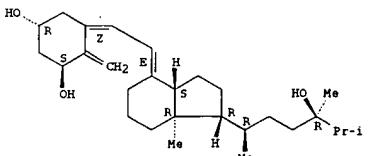
Absolute stereochemistry.
 Double bond geometry as shown.

L13 ANSWER 1 OF 11 CAPLUS COPYRIGHT 1999 ACS (Continued)



RN 157893-62-4 CAPLUS
 CN 9,10-Secosterosta-5,7,10(19)-triene-1,3,24-triol, (1.alpha.,3.beta.,5Z,7E)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.
 Double bond geometry as shown.



L13 ANSWER 2 OF 11 CAPLUS COPYRIGHT 1999 ACS

ACCESSION NUMBER: 1998:564197 CAPLUS
 DOCUMENT NUMBER: 129:170519
 TITLE: Method of treating prostatic diseases using delayed and/or sustained-release vitamin D formulations
 INVENTOR(S): Bishop, Charles W.; Knutson, Joyce C.; Valliere, Charles R.
 PATENT ASSIGNEE(S): Bone Care International, Inc., USA
 SOURCE: U.S., 17 pp. Cont.-in-part of U. S. 5,614,513.
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 4
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5795882	A	19980818	US 96-775447	19961230
US 5529991	A	19960625	US 94-196116	19940222
US 5614513	A	19970325	US 95-485354	19950607
WO 9829105	A2	19980709	WO 97-US22034	19971210
WO 9829105	A3	19981015		

V: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, LZ, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

AU 9878883 A1 19980731 AU 98-78883 19971210

PRIORITY APPLN. INFO.:

US 92-90186 19920622

US 94-196116 19940222

US 95-485354 19950607

US 96-775447 19961230

WO 97-US22034 19971210

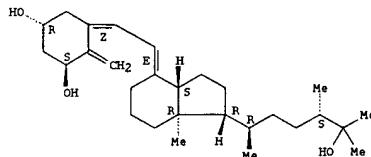
AB A method of treating prostatic conditions such as prostate cancer and hyperplasia involves administering 1.alpha.-hydroxyvitamin D or activated vitamin D or a combination thereof in a sustained-release form or a delayed and sustained-release formulation. Both the sustained-release form and the delayed, sustained-release form deliver increased active vitamin D blood levels without significant risk of hypercalcemia assocwd. with other oral dosing of vitamin D forms, to provide the beneficial effect to the diseased prostate tissue.

Patients with advanced androgen-independent prostate cancer were treated orally with 1.alpha.-24-dihydroxyvitamin D2.
 IT 131249-38-2, 1.alpha.,25-Dihydroxyvitamin D4 157893-62-4

RL: BAC (Biological activity or effector, except adverse); BPR (Biological)

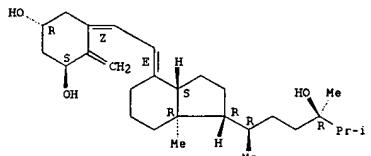
L13 ANSWER 2 OF 11 CAPLUS COPYRIGHT 1999 ACS (Continued)
 Process; THU (therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
 (delayed and/or sustained-release vitamin D formulations for treating prostatic diseases)
 RN 131249-38-2 CAPLUS
 CN 9,10-Secosterosta-5,7,10(19)-triene-1,3,25-triol, (1.alpha.,3.beta.,5Z,7E)-
 (9CI) (CA INDEX NAME)

Absolute stereochemistry.
 Double bond geometry as shown.



RN 157893-62-4 CAPLUS
 CN 9,10-Secosterosta-5,7,10(19)-triene-1,3,24-triol, (1.alpha.,3.beta.,5Z,7E)-
 (9CI) (CA INDEX NAME)

Absolute stereochemistry.
 Double bond geometry as shown.



IT 143032-85-3, 1.alpha.-Hydroxyvitamin D4
 RL: THU (therapeutic use); BIOL (Biological study); USES (Uses)
 (delayed and/or sustained-release vitamin D formulations for treating prostatic diseases)

L13 ANSWER 3 OF 11 CAPLUS COPYRIGHT 1999 ACS
 ACCESSION NUMBER: 1998:405433 CAPLUS
 DOCUMENT NUMBER: 129:49645
 TITLE: Methods of treating skin disorders with novel 1a-hydroxy vitamin D4 compounds
 INVENTOR(S): Knutson, Joyce C.; Bishop, Charles W.
 PATENT ASSIGNEE(S): Bone Care International, Inc., USA
 SOURCE: U.S., 12 pp. Cont.-in-part of U.S. Ser. No. 265,438.
 DOCUMENT TYPE: CODEN: USXKAM
 LANGUAGE: Patent
 FAMILY ACC. NUM. COUNT: 10
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5763428	A	19980609	US 95-484342	19950607
US 5488120	A	19960130	US 94-296084	19940824
US 5801164	A	19980901	US 95-480310	19950607
US 5756783	A	19980526	US 95-524889	19950907
WO 960154	A1	19961219	WO 96-US9222	19960606
W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT, RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
CA 2222591	AA	19961219	CA 96-2222591	19960606
AU 9662569	A1	19961230	AU 96-62569	19960606
EP 831938	A1	19980401	EP 96-921322	19960606
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE, PT, IE, FI				
PRIORITY APPLN. INFO.:				
			US 90-586854	19900921
			US 91-800045	19911129
			US 92-886554	19920520
			US 94-265438	19940624
			US 92-827173	19920129
			US 92-991493	19921217
			US 94-261730	19940617
			US 95-484342	19950607
			WO 96-US9222	19960606

AB Various skin disorders, including skin cancer, are treated with 1.alpha.-hydroxy vitamin D4 and its analogs, including 1,25-dihydroxy vitamin D4 and 1,24-dihydroxy vitamin D4. The compds. were prepd.

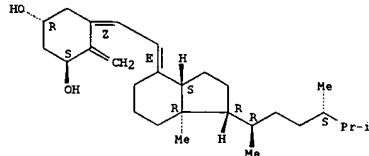
from ergosterol in a multi-step synthesis. They do not induce hypercalcemia.

IT 143032-85-3P

RL: BAC (Biological activity or effector, except adverse); RCT (Reactant);

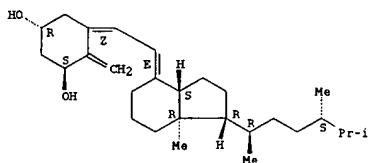
L13 ANSWER 2 OF 11 CAPLUS COPYRIGHT 1999 ACS (Continued)
 RN 143032-85-3 CAPLUS
 CN 9,10-Secosterosta-5,7,10(19)-triene-1,3-diol, (1.alpha.,3.beta.,5Z,7E)-
 (9CI) (CA INDEX NAME)

Absolute stereochemistry.
 Double bond geometry as shown.



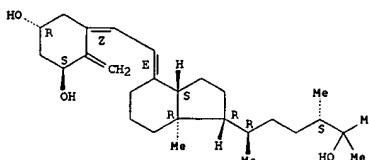
L13 ANSWER 3 OF 11 CAPLUS COPYRIGHT 1999 ACS (Continued)
 SPN (Synthetic preparation); THU (therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (prepn. and treating hyperproliferative skin disorders with novel 1a-hydroxy vitamin D4 derivs.)
 RN 143032-85-3 CAPLUS
 CN 9,10-Secosterosta-5,7,10(19)-triene-1,3-diol, (1.alpha.,3.beta.,5Z,7E)-
 (9CI) (CA INDEX NAME)

Absolute stereochemistry.
 Double bond geometry as shown.



IT 131249-38-2P 157893-62-4P
 RL: BAC (Biological activity or effector, except adverse); SPN (Synthetic preparation); THU (therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (prepn. and treating hyperproliferative skin disorders with novel 1a-hydroxy vitamin D4 derivs.)
 RN 131249-38-2 CAPLUS
 CN 9,10-Secosterosta-5,7,10(19)-triene-1,3,25-triol, (1.alpha.,3.beta.,5Z,7E)-
 (9CI) (CA INDEX NAME)

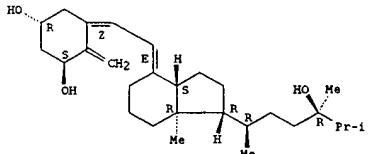
Absolute stereochemistry.
 Double bond geometry as shown.



RN 157893-62-4 CAPLUS
 CN 9,10-Secosterosta-5,7,10(19)-triene-1,3,24-triol, (1.alpha.,3.beta.,5Z,7E)-
 (9CI) (CA INDEX NAME)

L13 ANSWER 3 OF 11 CAPLUS COPYRIGHT 1999 ACS (Continued)

Absolute stereochemistry.
Double bond geometry as shown.



L13 ANSWER 4 OF 11 CAPLUS COPYRIGHT 1999 ACS
ACCESSION NUMBER: 1998:397781 CAPLUS
DOCUMENT NUMBER: 129:49643
TITLE: Method of treating prostatic diseases using active Vitamin D analogs
INVENTOR(S): Bishop, Charles W.; Knutson, Joyce C.; Mazess, Richard
PATENT ASSIGNEE(S): Bone Care International, Inc., USA
SOURCE: U.S., 10 pp. Cont.-in-part of U. S. 5,602,116.
CODEN: USXXAH
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 10
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5763429	A	19980609	US 96-781910	19961230
US 5403831	A	19950404	US 93-119895	19930910
US 5602116	A	19970211	US 95-415488	19950403
US 5798345	A	19980825	US 95-486387	19950607
WO 9829123	A1	19980709	WO 97-US22450	19971210
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		RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG		
AU 9855956	A1	19980731	AU 98-55956	19971210
		PRIORITY APPLN. INFO.:	US 93-119895	19930910
			US 94-265438	19940624
			US 95-415488	19950403
			US 95-486387	19950607
			US 88-227371	19980802
			US 90-569412	19900817
			US 90-596854	19900921
			US 91-800045	19911129
			US 91-812056	19911217
			US 92-812056	19920305
			US 92-896554	19920520
			US 96-781910	19961230
			WO 97-US22450	19971210

OTHER SOURCE(S): MARPAT 129:49643
AB The invention provides therapeutic methods for inhibiting, ameliorating or alleviating the hyperproliferative cellular activity of diseases of the

L13 ANSWER 4 OF 11 CAPLUS COPYRIGHT 1999 ACS (Continued)
prostate, e.g., prostatic cancer and prostatic hyperplasia, which includes

administering to a patient in need thereof an active vitamin D analog.
Cell differentiation is promoted, induced or enhanced without causing to the patient dose-limiting hypercalcemia and hypercalciuria. The compd. or its in vivo metabolite shows a vitamin D receptor binding affinity substantially equiv. to the binding affinity of 1,α,25-dihydroxyvitamin D3 and a hypercalcemia risk substantially lower than that of 1,α,25-dihydroxyvitamin D3. Patients with advanced androgen-independent prostate cancer began a course of therapy with 1,α,24-dihydroxy vitamin D2 (I). The maximal tolerated dosage (MTD) of daily oral I was detd. by administering progressively higher dosages to patients. The MTD for I was above 20.0 mg/day, a level which is 10- to 40-fold higher than that of 1,α,25-(OH)2D3 and patients treated with

the MTD of I for at least 6 mo reported that bone pain assoc. with metastatic disease was significantly diminished.

IT 131249-38-2 CAPLUS
1,α,25-Dihydroxyvitamin D4 143032-85-3
1,α,Hydroxyvitamin D4. 157893-62-4, 1,α,24-

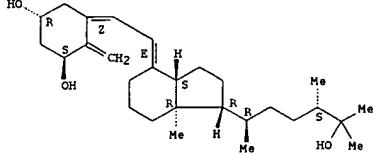
Dihydroxyvitamin D4

RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(prostatic diseases using active vitamin D analogs and anticancer agents)

RN 131249-38-2 CAPLUS
CN 9,10-Secocergosta-5,7,10(19)-triene-1,3,25-triol,
(1,α,3,β,5,27E)-
(9CI) (CA INDEX NAME)

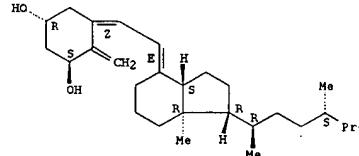
Absolute stereochemistry.
Double bond geometry as shown.



RN 143032-85-3 CAPLUS
CN 9,10-Secocergosta-5,7,10(19)-triene-1,3-diol,
(1,α,3,β,5,27E)-
(9CI) (CA INDEX NAME)

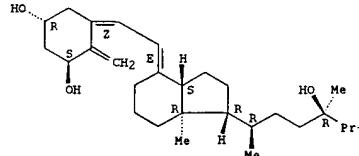
L13 ANSWER 4 OF 11 CAPLUS COPYRIGHT 1999 ACS (Continued)

Absolute stereochemistry.
Double bond geometry as shown.



RN 157893-62-4 CAPLUS
CN 9,10-Secocergosta-5,7,10(19)-triene-1,3,25-triol,
(1,α,3,β,5,27E)-
(9CI) (CA INDEX NAME)

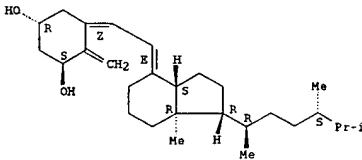
Absolute stereochemistry.
Double bond geometry as shown.



L13 ANSWER 5 OF 11 CAPLUS COPYRIGHT 1999 ACS
 ACCESSION NUMBER: 1998-87379 CAPLUS
 DOCUMENT NUMBER: 128:163243
 TITLE: Growth inhibition and differentiation induction
 in
 human monoblastic leukemia cells by
 1, alpha.-hydroxyvitamin D derivatives and their
 enhancement by combination with hydroxymurea
 AUTHOR(S): Makishima, M.; Okabe-Kado, J.; Hidaka, Y.
 CORPORATE SOURCE: Department of Chemotherapy, Saitama Cancer Center
 Research Institute, Saitama, 362- Japan
 SOURCE: Br. J. Cancer (1998), 77(1), 33-39
 CODEN: BJCAAI; ISSN: 0007-0920
 PUBLISHER: Churchill Livingstone
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB The active form of vitamin D, 1, alpha.,25-dihydroxyvitamin D3 (1,25(OH)2D3), is a potent inducer of differentiation in myeloid leukemic cells, but its clin. use is limited because of its hypercalcemic activity. The authors examd. the ability of 1,25(OH)2D3 in combination with several anti-cancer drugs to inhibit the proliferation of, and induce differentiation in, human monoblastic leukemia U937 cells. Hydroxyurea (HU), cytarabine and camptothecin showed effective synergism with 1,25(OH)2D3 with regard to growth inhibition, while daunorubicin and etoposide had only modest synergistic effects. HU and cytarabine effectively enhanced nitroblue tetrazolium-reducing activity induced by 1,25(OH)2D3. HU also enhanced the morphol. maturation and expression of CD11b and CD14 in cells treated with 1,25(OH)2D3. Among the anticancer drugs examd., HU had the greatest synergistic effects with 1,25(OH)2D3 with regard to growth inhibition and differentiation induction in U937 cells. HU also enhanced the differentiation of other myeloid leukemia HL-60, ML-1, THP-1, P39/TSU, P31/FUJ and NB4 cells induced by 1,25(OH)2D3 and that of U937 cells induced by 24-epi-1,25(OH)2D3 and 1,25(OH)2D7. Interestingly, 1, alpha.(OH)D derivs. (1, alpha.-hydroxyvitamin D3, D2, D4 and D7) effectively induced the differentiation of monoblastic leukemia U937, P39/TSU and P31/FUJ cells. HU also enhanced the growth inhibition and differentiation of U937 cells induced by 1, alpha.(OH)D derivs. As 1, alpha.(OH)D derivs. preferentially act on monocytic cells, they may be

L13 ANSWER 5 OF 11 CAPLUS COPYRIGHT 1999 ACS (Continued)
 useful in the treatment of acute monocytic leukemia, both alone and in combination with HU.
 IT 143032-85-3 1, alpha.-Hydroxyvitamin D4
 RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (growth inhibition and differentiation induction in human monoblastic leukemia cells by hydroxyvitamin D derivs. enhancement by hydroxymurea)
 RN 143032-85-3 CAPLUS
 CN 9,10-Secoergosta-5,7,10(19)-triene-1,3-diol, (1.alpha.,3.beta.,5Z,7E)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.
 Double bond geometry as shown.

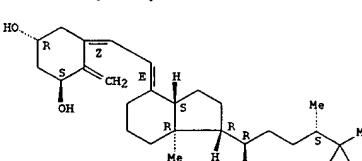


L13 ANSWER 6 OF 11 CAPLUS COPYRIGHT 1999 ACS
 ACCESSION NUMBER: 1997:134848 CAPLUS
 DOCUMENT NUMBER: 126:139903
 TITLE: Use of vitamin D4 hydroxy derivatives for
 treating
 skin disorders, preparation, biological
 activity, and
 pharmaceutical and cosmetic compositions
 INVENTOR(S): Knutson, Joyce C.; Bishop, Charles W.
 PATENT ASSIGNEE(S): Bone Care International, Inc., USA
 SOURCE: PCT Int. Appl., 41 pp.
 CODEN: PIXKD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 10
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9640154	A1	19961219	WO 96-US9222	19960606
FI,	W: AM, AT, AU, BB, BG, BY, CA, CH, CN, CZ, DE, DK, EE, LV,			
MD,	GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, MV,			
TJ,	MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK,			
GR,	TM, TT			
GR,	RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB,			
ML,	IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN,			
FI,	MR, NE, SN, TD, TG			
US 5763429	A	19980609	US 95-484342	19950607
AU 9662569	A1	19961230	AU 96-62569	19960606
EP 831838	A1	19980401	EP 96-921322	19960606
FI,	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE, PT, IE,			
PRIORITY APPLN. INFO.:				
	US 95-484342	19950607		
	US 90-586854	19900921		
	US 91-800045	19911129		
	US 92-886554	19920520		
	US 94-265438	19940624		
	WO 96-US9222	19960606		
AB	1, alpha.-Hydroxyvitamin D4 (I) and analogs, including 1,25-dihydroxyvitamin D4 and 1,24-dihydroxyvitamin D4, are disclosed which are useful as active compds. of pharmaceutical compns. for the treatment of disorders of calcium metab. and various skin disorders (skin cancer, dermatitis, eczema, etc.). I was effective increasing serum calcium in vitamin D-deficient rats. Synthesis of I is described, as are pharmaceutical and cosmetic compns. contg. 1, alpha.,24-dihydroxyvitamin D4. Antiproliferative activity, as well as its use in treatment of osteoporosis and psoriasis, are described.			
IT	131249-30-2 143032-85-3 157893-62-4			

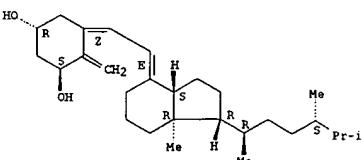
L13 ANSWER 6 OF 11 CAPLUS COPYRIGHT 1999 ACS (Continued)
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (vitamin D4 hydroxy derivs. for treating skin disorders, prepn., biol.
 activity, and pharmaceutical and cosmetic compns.)
 RN 131249-38-2 CAPLUS
 CN 9,10-Secosterane-5,7,10(19)-triene-1,3,25-triol, (1.alpha.,3.beta.,5Z,7E)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.
 Double bond geometry as shown.



RN 143032-85-3 CAPLUS
 CN 9,10-Secosterane-5,7,10(19)-triene-1,3-diol, (1.alpha.,3.beta.,5Z,7E)-(9CI) (CA INDEX NAME)

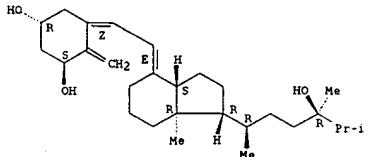
Absolute stereochemistry.
 Double bond geometry as shown.



RN 157893-62-4 CAPLUS
 CN 9,10-Secosterane-5,7,10(19)-triene-1,3,24-triol, (1.alpha.,3.beta.,5Z,7E)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.
 Double bond geometry as shown.

L13 ANSWER 6 OF 11 CAPLUS COPYRIGHT 1999 ACS (Continued)



L13 ANSWER 7 OF 11 CAPLUS COPYRIGHT 1999 ACS
ACCESSION NUMBER: 1997132772 CAPLUS
DOCUMENT NUMBER: 126:1399022
TITLE: Use of vitamin D₄ hydroxy derivatives for treating cancer and disorders of calcium metabolism, preparation, biological activity, and

pharmaceutical and cosmetic compositions
INVENTOR(S): Knutson, Joyce C.; Bishop, Charles W.
PATENT ASSIGNEE(S): Bone Care International, Inc., USA
SOURCE: PCT Int. Appl., 38 pp.
CODEN: PIXXDZ
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 10
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9640153	A1	19961219	WO 96-US9221	19960606
W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT, RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 5798345	A	19980825	US 95-486387	19950607
AU 9663791	A1	19961230	AU 96-63791	19960606
EP 831839	A1	19980401	EP 96-923223	19960606
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE, PT, IE, FI				
PRIORITY APPLN. INFO.:				
US 95-486387			US 95-486387	19950607
US 90-586854			US 90-586854	19900921
AU 91-800045			US 91-800045	19911129
US 92-886554			US 92-886554	19920520
US 94-265438			US 94-265438	19940624
WO 96-US9221			WO 96-US9221	19960606

AB 1. *alpha*-Hydroxyvitamin D₄ (I) and analogs, preferably 1,24-dihydroxyvitamin D₄, are disclosed which are useful as active compds. of pharmaceutical compns. for the treatment of disorders of calcium metab. and breast and colon cancers. I was effective increasing serum calcium in vitamin D-deficient rats. Synthesis of I is described, as are pharmaceutical and cosmetic compns. contg. 1.*alpha*,24-dihydroxyvitamin D₄. Antiproliferative activity, as well as its use in treatment of

L13 ANSWER 7 OF 11 CAPLUS COPYRIGHT 1999 ACS (Continued)

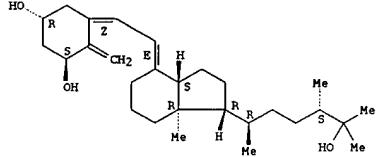
osteoporosis and psoriasis, are described.

IT 131249-38-2 143032-85-3 157893-62-4

HL THU (therapeutic use); BIOL (Biological study); USES (Uses)
(vitamin D₄ hydroxy derivs. for treating cancer and disorders of calcium metab., prepn., biol. activity, and pharmaceutical and cosmetic compns.)

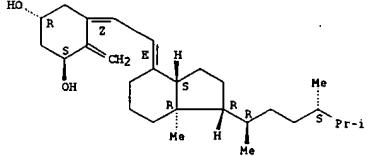
RN 131249-38-2 CAPLUS
CN 9,10-Secosterosta-5,7,10(19)-triene-1,3,25-triol,
(1.*alpha*-,3.*beta*-,5*Z*,7*E*)-
(9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.



RN 143032-85-3 CAPLUS
CN 9,10-Secosterosta-5,7,10(19)-triene-1,3-diol,
(1.*alpha*-,3.*beta*-,5*Z*,7*E*)-
(9CI) (CA INDEX NAME)

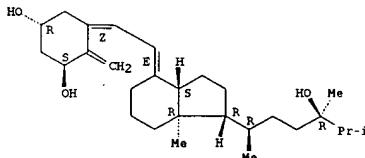
Absolute stereochemistry.
Double bond geometry as shown.



RN 157893-62-4 CAPLUS
CN 9,10-Secosterosta-5,7,10(19)-triene-1,3,24-triol,
(1.*alpha*-,3.*beta*-,5*Z*,7*E*)-
(9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as shown.

L13 ANSWER 7 OF 11 CAPLUS COPYRIGHT 1999 ACS (Continued)



L13 ANSWER 8 OF 11 CAPLUS COPYRIGHT 1999 ACS
 ACCESSION NUMBER: 1997:128093 CAPLUS
 DOCUMENT NUMBER: 126:148535
 TITLE: Method for treating and preventing secondary hyperparathyroidism
 INVENTOR(S): Knutson, Joyce C.; Bishop, Charles W.; Mazess, Richard
 PATENT ASSIGNEE(S): B.
 SOURCE: Bone Care International, Inc., USA
 U.S., 8 pp. Cont.-in-part of U.S. 5, 403, 831.
 CODEN: USXXAM
 DOCUMENT TYPE: Patent /
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 10
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
US 5602116	A	19970211	US 95-415488	19950403	
US 5104864	A	19920414	US 90-569412	19900817	
US 5403831	A	19950404	US 93-119895	19930910	
WO 9631215	A1	19961010	WO 96-US4553	19960403	
W: AU, BR, CA, CN, FI, HU, JP, KR, MX, NO, NZ, PL, SG RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL					
PT, SE	AA	19961010	CA 96-2217260	19960403	
AU 9653840	A1	19961023	AU 96-53840	19960403	
EP 820290	A1	19980128	EP 96-910720	19960403	
R: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL					
FI	BR 9604940	A	19980609	BR 96-4940	19960403
CN 1185109	A	19980617	CN 96-194098	19960403	
US 5763429	A	19980609	US 96-781910	19961230	
US 5707980	A	19980113	US 97-798958	19970211	
US 5861386	A	19990119	US 97-907658	19970808	
NO 9704480	A	19971114	NO 97-4480	19970529	
FI 9703868	A	19971002	FI 97-3868	19971002	
PRIORITY APPLN. INFO.:			US 88-227371	19880802	
			US 90-569412	19900817	
			US 92-812056	19920306	
			US 93-119895	19930910	
			US 91-812056	19911217	
			US 94-265438	19940624	
			US 95-415488	19950403	
			US 95-406387	19950607	
			WO 96-US4553	19960403	
			US 97-798958	19970211	

AB A method for preventing loss of bone mass or bone mineral content in
 a human being suffering from secondary hyperparathyroidism by
 administering a sufficient amt. of 1.alpha.-OH vitamin D2, 1.alpha.,24(S)-(OH)2
 vitamin

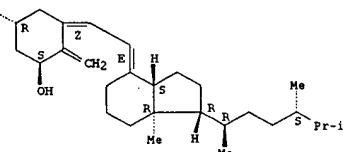
L13 ANSWER 9 OF 11 CAPLUS COPYRIGHT 1999 ACS
 ACCESSION NUMBER: 1996:710533 CAPLUS
 DOCUMENT NUMBER: 125:317372
 TITLE: Use of Vitamin D2 or vitamin D4 derivatives for
 the treatment of secondary hyperparathyroidism
 INVENTOR(S): Knutson, Joyce C.; Mazess, Richard B.; Bishop,
 Charles
 W.
 PATENT ASSIGNEE(S): Bone Care International, Inc., USA
 SOURCE: PCT Int. Appl., 30 pp
 CODEN: PIXX02
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 10
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
WO 9631215	A1	19961010	WO 96-US4553	19960403	
W: AU, BR, CA, CN, FI, JP, KR, MX, NO, NZ, PL, SG RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL					
PT, SE	A	19970211	US 95-415488	19950403	
AU 9653840	A1	19961023	AU 96-53840	19960403	
EP 820290	A1	19980128	EP 96-910720	19960403	
R: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL					
FI	BR 9604940	A	19980609	BR 96-4940	19960403
NO 9704480	A	19971114	NO 97-4480	19970929	
FI 9703868	A	19971002	FI 97-3868	19971002	
PRIORITY APPLN. INFO.:			US 95-415488	19950403	
			US 88-227371	19880802	
			US 90-569412	19900817	
			US 92-812056	19920306	
			US 93-119895	19930910	
			US 91-812056	19911217	
			US 94-265438	19940624	
			US 95-415488	19950403	
			US 95-406387	19950607	
			WO 96-US4553	19960403	
			US 97-798958	19970211	

AB A method for preventing loss of bone mass or bone mineral content in
 a human being suffering from secondary hyperparathyroidism comprises
 administering a sufficient amt. of 1.alpha.-OH vitamin D2, 1.alpha.,24(S)-(OH)2
 vitamin D2, 1.alpha.-OH vitamin D4, or
 1.alpha.,24(R)-(OH)2 Vitamin D4. Treatment of patients undergoing
 chronic hemodialysis with two consecutive 12 wk courses of therapy with 4
 .mu.g/day 1.alpha.-OH vitamin D2 decreased the serum parathyroid
 hormone level to 50% of the pretreatment level.
 IT 143032-85-3, 1.alpha.-Hydroxy vitamin D4 157893-62-4
 RL: BAC (Biological activity or effector, except adverse); THU
 (therapeutic use); BIOL (Biological study); USES (Uses)
 (use of vitamin D2 or vitamin D4 derivs. for treatment of
 secondary hyperparathyroidism)
 RN 143032-85-3 CAPLUS
 CN 9,10-Secocrosta-5,7,10(19)-triene-1,3-diol, (1.alpha.,3.beta.,5Z,7E)-
 (9CI) (CA INDEX NAME)

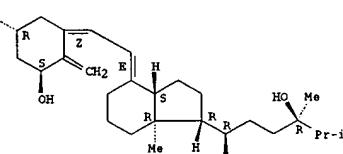
L13 ANSWER 8 OF 11 CAPLUS COPYRIGHT 1999 ACS (Continued)
 D2, 1.alpha.-OH vitamin D4 or 1.alpha.,24(R)-(OH)2 vitamin D4 was
 reported
 IT 143032-85-3, 1.alpha.-Hydroxy vitamin d4 157893-62-4
 RL: THU (therapeutic use); BIOL (Biological study); USES (Uses)
 (vitamin D formulations for treating and preventing secondary
 hyperparathyroidism)
 RN 143032-85-3 CAPLUS
 CN 9,10-Secocrosta-5,7,10(19)-triene-1,3-diol, (1.alpha.,3.beta.,5Z,7E)-
 (9CI) (CA INDEX NAME)

Absolute stereochemistry.
 Double bond geometry as shown.



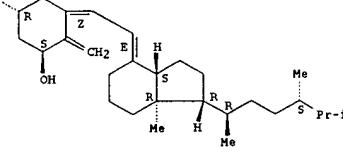
RN 157893-62-4 CAPLUS
 CN 9,10-Secocrosta-5,7,10(19)-triene-1,3,24-triol,
 (1.alpha.,3.beta.,5Z,7E)-
 (9CI) (CA INDEX NAME)

Absolute stereochemistry.
 Double bond geometry as shown.



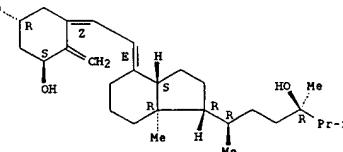
L13 ANSWER 9 OF 11 CAPLUS COPYRIGHT 1999 ACS (Continued)
 (9CI) (CA INDEX NAME)

Absolute stereochemistry.
 Double bond geometry as shown.



RN 157893-62-4 CAPLUS
 CN 9,10-Secocrosta-5,7,10(19)-triene-1,3,24-triol,
 (1.alpha.,3.beta.,5Z,7E)-
 (9CI) (CA INDEX NAME)

Absolute stereochemistry.
 Double bond geometry as shown.



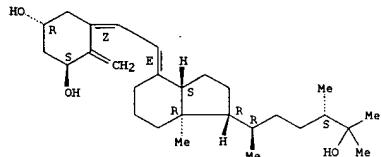
L13 ANSWER 10 OF 11 CAPLUS COPYRIGHT 1999 ACS
 ACCESSION NUMBER: 19961447075 CAPLUS
 DOCUMENT NUMBER: 125;123721
 TITLE: Oral 1, alpha.-hydroxyvitamin D
 INVENTOR(S): Knutson, Joyce C.; Valliere, Charles R.; Bishop, Charlen W.
 PATENT ASSIGNEE(S): Lunar Corp., USA
 SOURCE: U.S., 12 pp. Cont.-in-part of U.S. Ser. No. 901,886,
 abandoned.
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 4
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5529991	A	19960625	US 94-196116	19940222
US 5622941	A	19970422	US 94-188942	19940126
US 5614513	A	19970325	US 95-485354	19950607
AU 9660608	A1	19961003	AU 96-60608	19960722
US 5795882	A	19980818	US 96-775447	19961230
PRIORITY APPLN. INFO.:			US 92-901886	19920622
			US 94-196116	19940222
			US 95-485354	19950607

OTHER SOURCE(S): MARPAT 125:123721
 AB An enteric-coated sustained-release oral dosage form for vitamin D for treatment of osteoporosis and psoriasis and prevention of bone loss in hemodialysis is claimed. The compn. comprises a matrix contg. an activated vitamin D or 1, alpha.-hydroxy vitamin D coated with cellulose acetate phthalate or an acrylic polymer of Eudragit type. IT 131249-38-2, 1, alpha., 25-Dihydroxy vitamin D4 143032-85-3
 , 1, alpha.-Hydroxy vitamin D4 157893-62-4
 RL THM (Therapeutic use); BIOL (Biological study); USES (Uses) (enteric-coated sustained-release oral dosage forms for vitamin D)
 RN 131249-38-2 CAPLUS
 CN 9,10-Secooergosta-5,7,10(19)-triene-1,3,25-triol,
 (1, alpha., 3, beta., 5Z, 7E)-
 (9CI) (CA INDEX NAME)

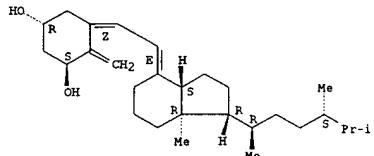
Absolute stereochemistry.
 Double bond geometry as shown.

L13 ANSWER 10 OF 11 CAPLUS COPYRIGHT 1999 ACS (Continued)



RN 143032-85-3 CAPLUS
 CN 9,10-Secooergosta-5,7,10(19)-triene-1,3-diol, (1, alpha., 3, beta., 5Z, 7E)-
 (9CI) (CA INDEX NAME)

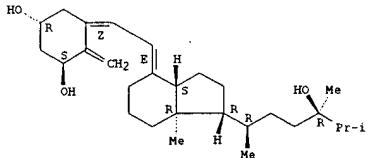
Absolute stereochemistry.
 Double bond geometry as shown.



RN 157893-62-4 CAPLUS
 CN 9,10-Secooergosta-5,7,10(19)-triene-1,3,24-triol,
 (1, alpha., 3, beta., 5Z, 7E)-
 (9CI) (CA INDEX NAME)

Absolute stereochemistry.
 Double bond geometry as shown.

L13 ANSWER 10 OF 11 CAPLUS COPYRIGHT 1999 ACS (Continued)



L13 ANSWER 11 OF 11 CAPLUS COPYRIGHT 1999 ACS
 ACCESSION NUMBER: 1994:107472 CAPLUS
 DOCUMENT NUMBER: 120:107472
 TITLE: Preparation of vitamin D derivatives
 INVENTOR(S): Yokoyama, Shinji; Tejima, Takeshi; Tachibana, Yoji
 PATENT ASSIGNEE(S): Nisshin Flour Milling Co, Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.
 CODEN: JKXKAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05163238	A2	19930629	JP 91-333057	19911217

OTHER SOURCE(S): CASREACT 120:107472
 AB Vitamin D derivs. [i; R1 = Me, R2 = H; R1 = H, R2 = Me], useful in treating bone metabolic disorders (no data), are prep'd. by a simplified scheme via a 4-phenyl-1,2,4-triazoline-3,5-dione-protected intermediate. Reaction of ergosterol with 4-phenyl-1,2,4-triazoline-3,5-dione in CH2Cl2 followed by silylation with Me3CSiMe2Cl gave silyl ether II. II was further reacted in 8 steps to give III, which was heated in HOAc at 55.degree. to give a 3-beta.-acetate 25-triethylsilyl ether deriv., which was then desilylated with 1M Bu4N+ F- in THF at 50.degree. and saponified with ethanolic KOH to give (24S)-I (R1 = H, R2 = Me). IT 131249-38-2P
 RL SPN (Synthetic preparation); THM (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (prep'n. of, for treatment of bone disease)
 RN 131249-38-2 CAPLUS
 CN 9,10-Secooergosta-5,7,10(19)-triene-1,3,25-triol,
 (1, alpha., 3, beta., 5Z, 7E)-
 (9CI) (CA INDEX NAME)

Absolute stereochemistry.
 Double bond geometry as shown.

